

Serial No. 09/882,119
Page 2 of 10

IN THE CLAIMS

Please consider the claims pending in this application as follows:

1. (original) A method for concatenating packets to be transmitted from a first node to a second node, the method comprising the steps of:

(a) receiving packets having at least one traffic characteristic from at least one input port;

(b) concatenating n received packets to form a concatenated packet; and

(c) transmitting the concatenated packet from the first node to the second node, characterized in that

the n received packets have a common traffic characteristic and n is determined based on the common traffic characteristic.

2. (original) The method of claim 1 wherein the concatenated packet is transmitted through a channel in a communication network, the common traffic characteristic requires a delay of less than p milliseconds, and the concatenated packet comprises a common header, a content information part for each of the n received packet and a payload for each of the n received packet.

3. (original) The method of claim 2 wherein the channel has a bandwidth of B and n is determined by solving n from an equation of the form $(H + nI + \sum_{i=1}^n P_i) / B < p / 1000$, where H is the size of the common header, I is the size of the content information part of each of the n received packets, and P_i is the size of the payload of the i th of the n received packets.

4. (original) The method of claim 2 wherein the channel has a bandwidth of B and if P_{max} represents the maximum possible payload size of a received packet having the common traffic characteristic, n is determined by solving n from an equation of the form $(H + n(I + P_{max})) / B \leq p / 1000$, where H is the size of the common header and I is the size of the content information part of each of the n received packets.

350980-1

Serial No. 09/882,119

Page 3 of 10

5. (original) The method of claim 1 wherein the concatenated packet is transmitted through a channel in a communication network, the common traffic characteristic is delay insensitive, and the concatenated packet comprises a common header, a content information part for each of the n received packet and a payload for each of the n received packet.

6. (original) The method of claim 5 wherein the maximum packet size allowed by the communication network is M bytes and n is determined by solving n from an equation of the form $H + nI + \sum_{i=1}^n P_i \leq M$, where H is the size of the common header, I is the size of the content information part of each of the n received packets, and P_i is the size of the payload of the i th of the n received packets.

7. (original) The method of claim 5 wherein the maximum packet size allowed by the communication network is M bytes and if P_{max} represents the maximum possible payload size of a received packet having the common traffic characteristic, n is determined by solving n from an equation of the form $H + n(I + P_{max}) \leq M$, where H is the size of the common header, and I is the size of the content information part of each of the n received packets.

8. (original) An apparatus for concatenating packets to be transmitted from a first node to a second node, the apparatus comprising:

- (a) at least one input port for receiving packets;
- (b) a traffic characteristic classifier for classifying and storing received packets of different traffic characteristics into different traffic characteristic groups in memory;
- (c) a concatenated packets preparer for forming a concatenated packet from n received packets; and
- (d) at least one output port for transmitting the concatenated packet to the second node, characterized in that

the n packets belong to one traffic characteristic group and n is determined based on

350980-1

Serial No. 09/882,119

Page 4 of 10

the traffic characteristic of the one traffic characteristic group.

9. (original) The apparatus of claim 8 wherein the concatenated packet is transmitted through a channel in a communication network, the n packets belong to the one traffic characteristic group that requires a delay time of less than p milliseconds, and the concatenated packet comprises a common header of H bytes, a content information part of I bytes for each of the n received packets, and a payload of P_i bytes for i th of the n received packets.

10. (original) The apparatus of claim 9 wherein the channel has a bandwidth of B and n is determined by solving n from an equation of the form

$$(H + nI + \sum_{i=1}^n P_i) / B < p / 1000 .$$

11. (original) The method of claim 9 wherein the channel has a bandwidth of B and if P_{max} represents the maximum possible payload size of a received packet having the common traffic characteristic, n is determined by solving n from an equation of the form

$$(H + n(I + P_{max})) / B \leq p / 1000 .$$

12. (original) The apparatus of claim 8 wherein the concatenated packet is transmitted through a channel in a communication network, the n packets belong to the one traffic characteristic group that is delay insensitive, and the concatenated packet comprises a common header of H bytes, a content information part of I bytes for each of the n received packets, and a payload of P_i bytes for i th of the n received packets.

13. (original) The apparatus of claim 12 wherein the maximum packet size allowed by the communication network is M bytes and n is determined by solving n from an equation of the form $H + nI + \sum_{i=1}^n P_i \leq M .$

Serial No. 09/882,119

Page 5 of 10

14. (original) The method of claim 12 wherein the maximum packet size allowed by the communication network is M bytes and if P_{max} represents the maximum possible payload size of a received packet having the common traffic characteristic, n is determined by solving n from an equation of the form $H + n(I + P_{max}) \leq M$.